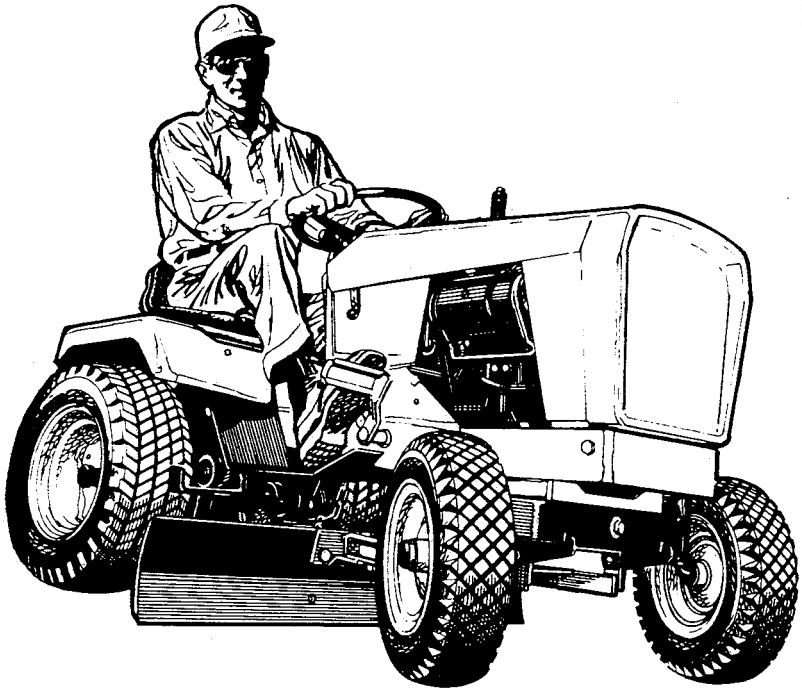
OPERATOR'S MANUAL

42" GRADER BLADE



42" GRADER BLADE
MFG. NO. 1690038

CAUTION: Read Manual Thoroughly Before Operating

FORM - 1651209
PRINTED IN U.S.A.
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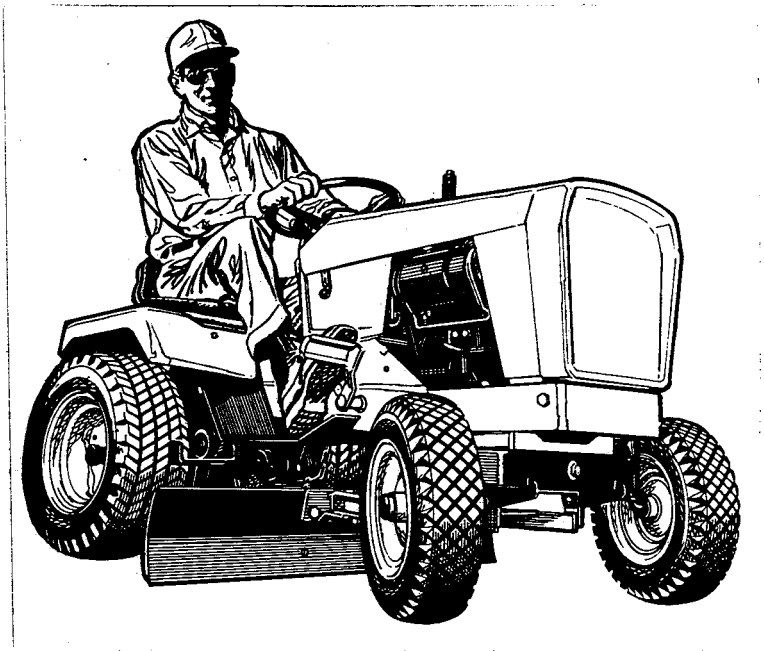
42 Inch Grader Blade



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WARNING

Read these safety rules and follow them closely. Failure to obey these rules could result in loss of control of vehicle, severe personal injury to yourself or bystanders, or damage to property or equipment affecting safety.

This notation preceding Cautions and Warnings in the text signifies important precautionary steps which, if not properly followed, could result in personal injury or damage to your equipment affecting safety.

Safety Rules

General

- Read the operator's manual carefully. Be thoroughly familiar with the controls and proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
- Use only attachments or accessories designed for your machine. See your dealer for a complete list of approved attachments or accessories.
- Never allow children to operate the machine. Do not allow adults to operate it without proper instruction.
- Keep the area of operation clear of all persons, particularly small children, and pets.
- Do not carry any passengers.
- Make sure:
  a. tractor and attachments are in good operating condition,
  b. all safety devices and shields are in place and in good working condition, and
  c. all adjustments (blade angle, etc.) have been made.

Preparation

- Handle gasoline with care – it is highly flammable.
  a. Use approved gasoline container.
  b. Never remove the cap of the fuel tank or add gasoline to a running or hot engine, or fill the fuel tank indoors. Wipe up spilled gasoline.
- Do not run the engine indoors. Exhaust fumes are deadly.
- Shift into neutral before attempting to start the engine.
- Wear heavy footwear. Do not operate tractor when barefoot or when wearing open sandals or canvas shoes.

Operation

- Do not allow anyone to use the grader blade unless they have been instructed on how to operate it safely.
- Never attempt to adjust, repair or service the grader blade while the tractor engine is running.
- Be especially careful not to touch tractor or attachment parts which might be hot from operation. Allow such parts to cool before attempting to maintain, adjust or service.
- Do not allow others near the grader blade while it is being used.
- Use the grader blade only in daylight, or good artificial light.
- Always lower the grader blade completely to the ground when leaving it unattended to prevent it from being accidentally lowered and causing injury.
- Always operate the tractor at reasonable speeds to prevent the blade from catching an object and stopping the tractor abruptly.

Assembly and Installation

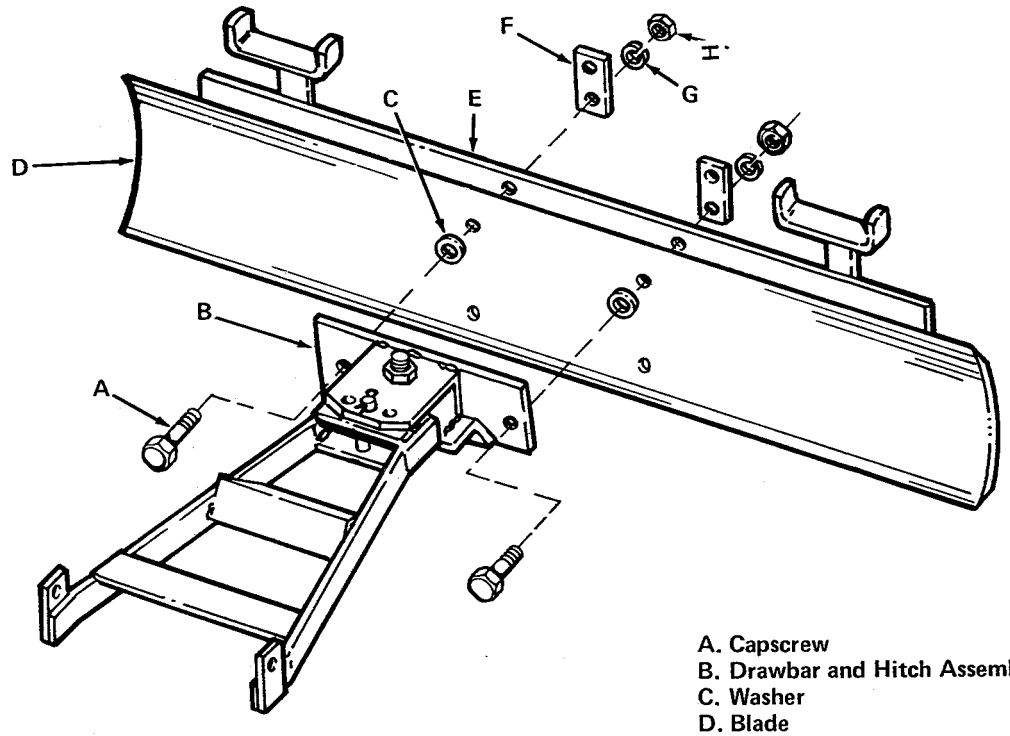
CONTENT OF SECTION

Before it can be used, the grader blade must be assembled and then installed on your tractor. This section describes how to do these tasks as well as how to remove the blade when you have finished grading.

ASSEMBLY OF GRADER BLADE

The grader blade is partially disassembled for shipping. To assemble the grader blade, proceed as follows:

1. Push capscrew (item A, figure 1) through hole of drawbar and hitch assembly (item B).
2. Add washer (item C). Then run capscrew through upper hole of blade (item D) and hole of bracket assembly (item E).
3. Install link (item F), lockwasher (item G), and nut (item H). Do not tighten nut at this time.
4. Repeat steps 1 through 3 to secure other sides of drawbar and hitch assembly, blade, and bracket assembly.
5. Tighten both nuts (item H). Be sure open holes of links (item F) are above bracket assembly.



A. Capscrew
B. Drawbar and Hitch Assembly
C. Washer
D. Blade
E. Bracket Assembly
F. Link
G. Lockwasher
H. Nut

Figure 1. Grader Blade Assembly

ASSEMBLY OF PARTS TO TRACTOR

A transport hook (item A, figure 2) is included with the grader blade. The transport hook should be assembled to the tractor as follows:

1. Remove and discard carriage bolt (item B) and nut that secure left footrest to tractor.

⚠ WARNING

Before attempting to install, adjust, or remove the grader blade, be sure engine is shut off, the parking brake set, and the ignition key is removed.

2. Install longer carriage bolt (item C) received with grader blade through holes in footrest and tractor frame.
3. On capscrew inside of tractor frame, install flat washer (item D), transport hook (item A), nylon washer (item E), flat washer (item F), lockwasher (item G), and jam nut (item H). Tighten jam nut until ends of lockwasher are flat. The transport hook should be free enough to pivot out of the way when desired.

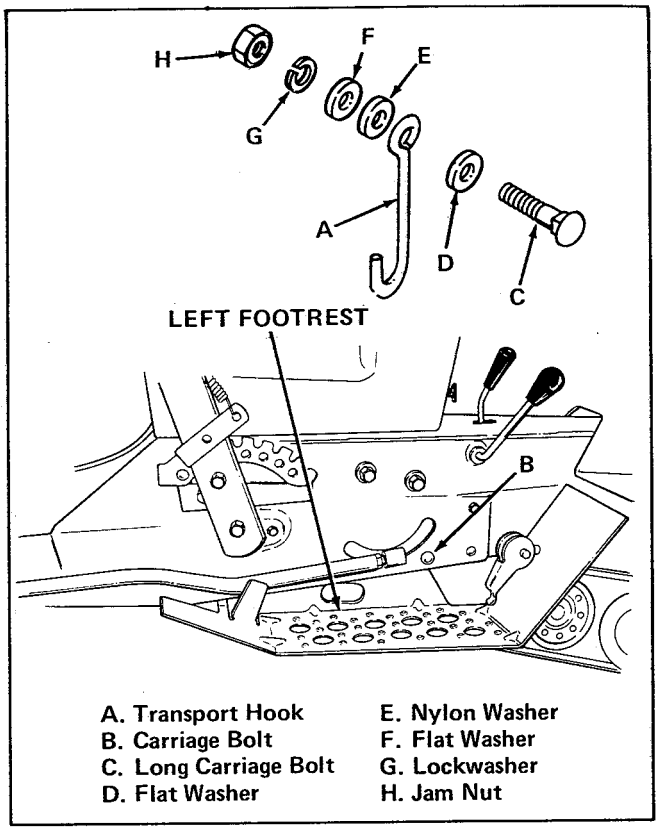


Figure 2. Install Transport Hook

INSTALLATION

Install the grader blade on your tractor as follows:

1. Slide grader blade (item A, figure 3) under center of tractor from either side. Blade should be just in front of rear wheels with blade hitch under front axle of tractor.
2. Raise blade hitch and attach it to rear holes of front tractor hitch using two pins (item B) and spring clips (item C). To prevent loss or damage, be sure spring clips are inserted all the way into pin holes.
3. Use lift lever or optional electric lift switch to lower tractor lift devices.
4. If tractor has lift cable, attach cable clevis (item D) to link (item E) on right side of grader blade using a pin (item F) and spring clip (item G). If tractor does not have lift cable, use chain (item H) and other items supplied with grader blade to attach link (item I) to tractor lift arm (item J).

REMOVAL

To remove the grader blade from the tractor, proceed as follows:

1. Be sure transport hook is not attached to grader blade. Then lower grader blade to ground.
2. Remove spring clip and pin to detach tractor lift cable or lift arm from grader blade. Reinstall pin and spring clip on grader blade to prevent loss.
3. Remove spring clips (item C, figure 3) and pins (item B) and lower grader blade hitch to ground. To prevent loss, reinstall pins and spring clips on grader blade.
4. Slide grader blade out from under tractor on either side.

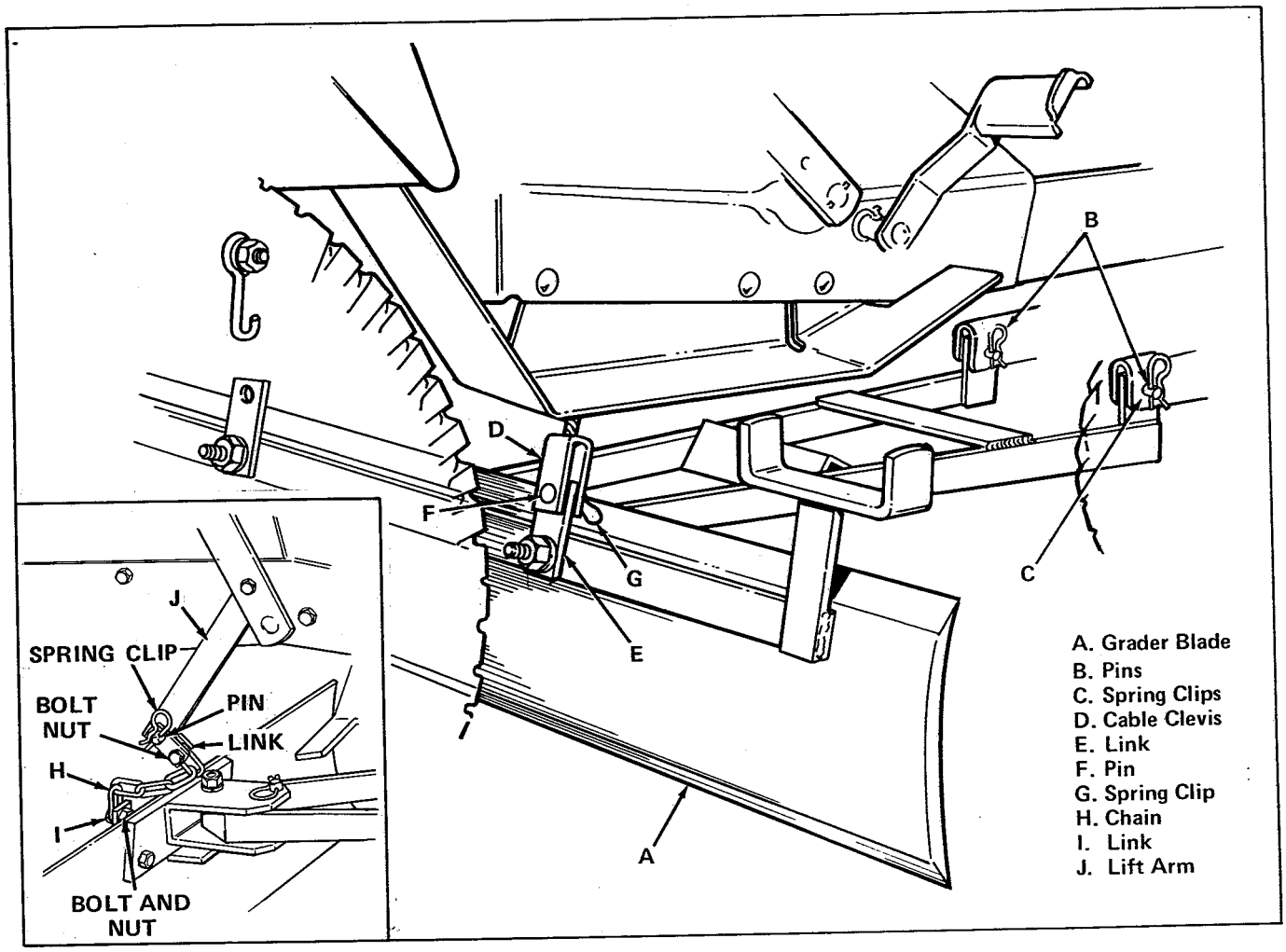


Figure 3. Install Grader Blade

Operation

CONTENT OF SECTION

A brief description of the grader blade controls, followed by the basic operating procedures,is given in this section to help you get to know your grader blade and how to operate it safely and efficiently.

CONTROLS

The grader blade is operated using controls on the tractor. Figure 4 shows the locations, names, and functions of these controls.

OPERATING PROCEDURES

The tractor supplies both the power and motion for the grader blade. Therefore, tractor operation is vital to proper operation of the blade. Details for grader blade operation are given in paragraphs that follow. Read all of these paragraphs. Then read the general operating procedure for tractor operation with attachments given in the tractor manual before starting into operation.

⚠ WARNING

Before starting to inspect, adjust, or service the grader blade, make sure the tractor engine is stopped and the ignition key is removed.

CHECKS BEFORE STARTING

The checks listed below should be performed before each use of the grader blade.

1. Read this manual. Read the tractor operator's manual. Be sure you know safety precautions and the locations and uses of operating controls.
2. Check the grader blade to be sure that it is properly installed on the tractor. Be sure that all nuts, bolts, and spring clips are secure.

RAISING THE BLADE

Use the lift lever or optional electric lift switch on the tractor to raise or lower the grader blade.

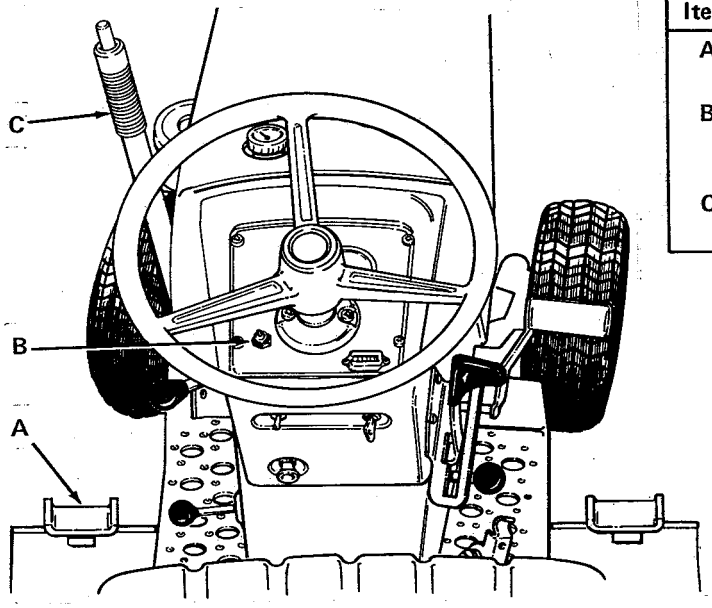
TRANSPORTING THE BLADE

When you use the tractor to transport the grader blade to and from work areas, it should be raised with the transport hook attached. The transport hook (item A, figure 5) attaches to link (item B) after the blade is fully raised.

⚠ WARNING

Be particularly careful and operate at low tractor speeds in any area where the blade can hook on solid objects. Such objects can jar the tractor or bring it to an abrupt stop.

Figure 4. Locations and Functions of Controls



Item	Name	Function
A	Stirrups	Used to apply extra pressure for hard grading jobs.
B	Power Lift Switch (Optional)	Controls optional electrically operated power lift for grader blade.
C	Lift Lever (Standard)	Used to raise and lower grader blade if item B is not present.

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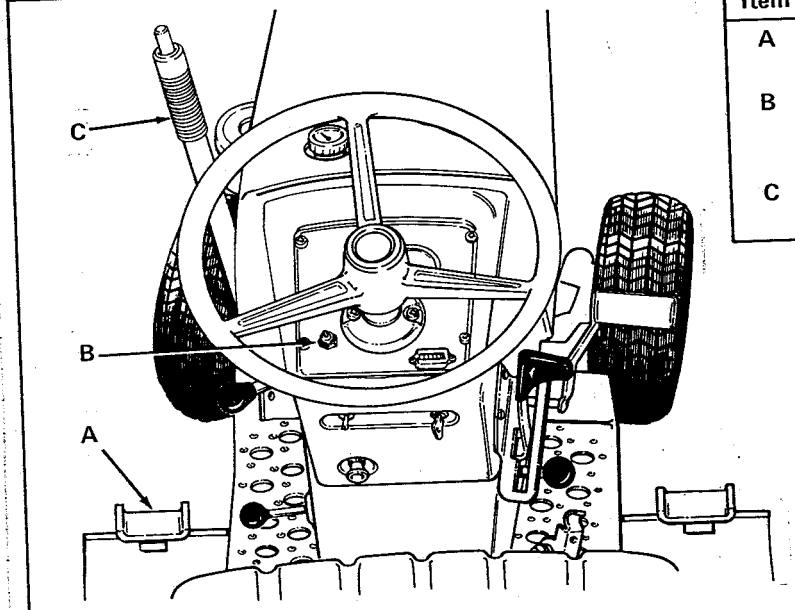

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BLADE ANGLE

The grader blade may be positioned to face straight ahead or angled to the left or right. To adjust, use tractor lift and raise the blade off the ground. Remove the spring clip (item C, figure 5) and king pin (item D). Move the blade to desired position and replace the king pin and spring clip.

GRADING

The grader blade is ideal for leveling and smoothing dirt, gravel, etc. Select a low transmission gear and an engine speed of 1/2 to full throttle, depending upon the terrain and type of work to be done.

⚠ WARNING

Use forward tractor motion to push the material to the desired location. Then reverse the tractor and drag the blade backwards for final leveling. Pack down dirt or gravel by driving the tractor over the leveled area.

If increased weight is needed to level or move hard ground, press your feet on stirrups (item A, figure 4) to apply the required pressure.

OPERATION ON SLOPES

Always operate the grader blade up and down the face of slopes, and never across the face. Do not attempt to grade on excessively steep slopes. Use four rear wheel weights when needed for traction and for stability to operate on slopes greater than 20 percent (11.3 degrees). Never operate on slopes greater than 35 percent (19.3 degrees).

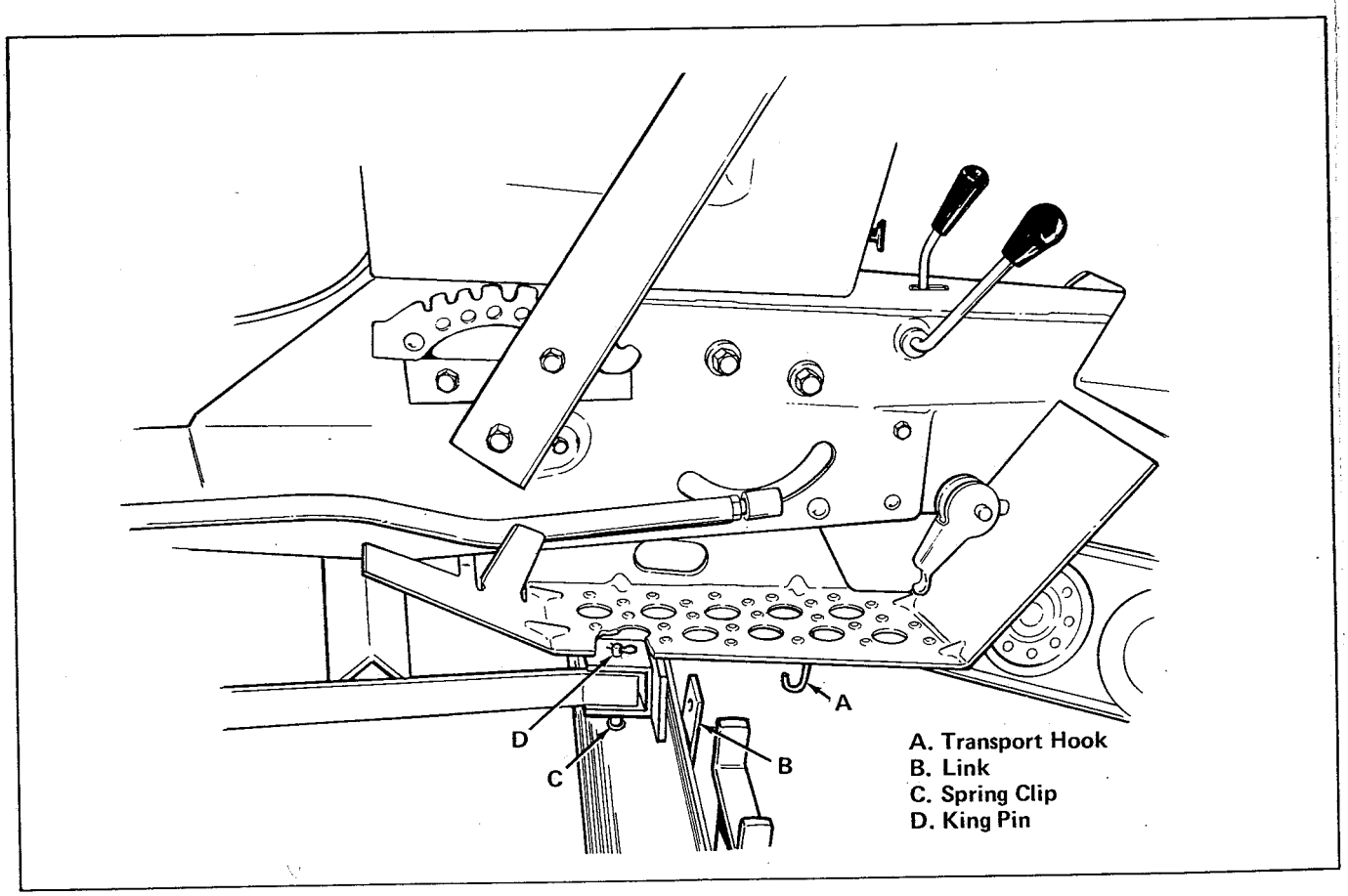

Figure 5. Blade Operation

Normal Care

CONTENT OF SECTION

Your grader blade was built to provide years of service with only minor care. These minor tasks, however, must be done to keep it in good operating condition and to avoid costly repairs. This section describes when and how to perform the needed care.

AFTER EACH USE

After each use, check the grader blade to be sure that all pins and spring clips are securely fastened. After grading, hose down the blade to remove excess dirt. Then lightly oil pivot points and bare metal surfaces to prevent rusting.

While you are performing these tasks, also check the bottom of the blade for wear. If the bottom of the blade is worn excessively, it can be reversed. Remove the two blade mounting bolts, turn the blade upside down and re-install the bolts.

NORMAL STORAGE

To protect the grader blade, store it in an enclosed, dry area.

OFF-SEASON STORAGE

When the grader blade is to be stored for 30 days or more, take the following precautions:

1. Remove grader blade from tractor.
2. Thoroughly clean unit with water using a hose.
3. Coat all bare metal surfaces with a good quality paint (obtainable from your dealer) or a light film of grease or oil.

Accessories

There are many optional accessories and attachments available for your tractor to make grading easier. See your dealer if you wish to purchase any of the following:

WHEEL WEIGHTS, REAR – improve traction in loose soil or on slippery surfaces.

ELECTRIC LIFT KIT – raises and lowers grader blade and other attachments with the flip of a switch.

FRONT WEIGHT – improves stability and steering on slopes.

HOURMETER – records engine operating time in tenths of an hour.

CHAINS – provide additonal traction.

REAR LIGHT KIT – lights path when traveling in reverse at night.